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Project	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS, BANGALORE
Contractor	Sri. Gopikrishna Apsani (Nidhi Constructions)

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	DBM		**Proposed Use**	**DBM**
Sample Location	At plant		**Date of Sampling**	**05-04-2022**
			Date of Testing	**05-04-2022**

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	7378	665	7045	352
31.5	25.0	4125	245	3635	275
25.0	20.0	2455	250	1908	233
20.0	16.0	1545	332	920	255
16.0	12.5	592	107	456	190
12.5	10.0	490	68	272	86
10.0	6.3	125	70	66	61
Total		**16710**	**1737**	**14302**	**1452**

Results

Flakiness Index(%):	10.39
Elongation Index(%):	10.15
Combined FI+EL (%)	20.55

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BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM MIX

Name of Work	:	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, BANGALORE
Contractor	:	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing	:	07-04-2022
Type of Mix	:	DBM
Sample I/D	:	DBM-1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	875	921
2. Weight of Mixture after extraction, g	837	881
3. Weight of Bitumen	38	40
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	40.00	42.00
8. Bitumen content in %	4.57	4.56
9. Average Bitumen content in %	4.57	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION

(As per MORT&H 500-10,Grading-2)

Sample Location:	Virupakshanagar 4th and 5th cross road.	**Date of Sampling:**	07-04-2022
		Date of testing:	07-04-2022
Type of material & Purpose:	DBM	**Oven Dry Wt.(gms):**	837

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0.0	0.0	0.00	100.00	100.00
26.50	44.0	44.0	5.26	94.74	90-100
19.00	132.0	176.0	21.03	78.97	71-95
13.20	115.0	291.0	34.77	65.23	56-80
4.750	152.0	443.0	52.93	47.07	38-54
2.360	102.0	545.0	65.11	34.89	28-42
0.300	181.0	726.0	86.74	13.26	7-21
0.075	65.0	791.0	94.50	5.50	2-8
Pan	46.0	837.0			
Total	837.0				

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BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM MIX

Name of Work	:	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, BANGALORE
Contractor	:	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing	:	07-04-2022
Type of Mix	:	DBM
Sample I/D	:	DBM-2

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	894	975
2. Weight of Mixture after extraction, g	855	933
3. Weight of Bitumen	39	42
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	41.00	44.00
8. Bitumen content in %	4.59	4.51
9. Average Bitumen content in %	4.55	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION

(As per MORT&H 500-10,Grading-2)

Sample Location:	Virupakshanagar 3rd cross road.	**Date of Sampling:**	07-04-2022
		Date of testing:	07-04-2022
Type of material & Purpose:	DBM	**Oven Dry Wt.(gms):**	855

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0.0	0.0	0.00	100.00	100.00
26.50	46.0	46.0	5.38	94.62	90-100
19.00	132.0	178.0	20.82	79.18	71-95
13.20	118.0	296.0	34.62	65.38	56-80
4.750	169.0	465.0	54.39	45.61	38-54
2.360	99.0	564.0	65.96	34.04	28-42
0.300	148.0	712.0	83.27	16.73	7-21
0.075	92.0	804.0	94.04	5.96	2-8
Pan	51.0	855.0			
Total	855.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT				
Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10			
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE			
Consultant :	TEJUS CONSULTANTS, BANGALORE			
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)			
Date of Testing :	07-04-2022			
Type of Mix :	Tack coat			
Sample I/D :	1			
Location :	Virupakshanagar 4th and 5th cross road.			
Determination	**Unit**	**Test No**		
		1	**2**	**3**
Location	**Chainage**	**@54**	**@102**	**@200**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.762	0.748	0.804
Final weight of plate after application of tack Coat (c)	Kg	0.785	0.771	0.827
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.253	0.253	0.253
Average	Kg/sq.m	0.253		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No 10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	07-04-2022
Type of Mix :	Tack coat
Sample I/D :	2
Location :	Virupakshanagar 3rd cross road

Determination	**Unit**	**Test No**		
		1	**2**	**3**
Loacation	**Chainage**	**@63**	**@116**	**@262**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.790	0.766	0.830
Final weight of plate after application of tack Coat (c)	Kg	0.813	0.789	0.853
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.252	0.252	0.252
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM MIX

Name of Work	:	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS, BANGALORE
Contractor	:	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing	:	08-04-2022
Type of Mix	:	DBM
Sample I.D	:	DBM-1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	905	953
2. Weight of Mixture after extraction, g	866	912
3. Weight of Bitumen	39	41
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	41.00	43.00
8. Bitumen content in %	4.53	4.51
9. Average Bitumen content in %	4.52	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION
(As per MORT&H 500-10,Grading-2)

Sample Location:	Renukamba Temple Road.	**Date of Sampling:**	08-04-2022
		Date of testing:	08-04-2022
Type of material & Purpose:	DBM	**Oven Dry Wt.(gms):**	866

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0.0	0.0	0.00	100.00	100.00
26.50	52.0	52.0	6.00	94.00	90-100
19.00	125.0	177.0	20.44	79.56	71-95
13.20	133.0	310.0	35.80	64.20	56-80
4.750	172.0	482.0	55.66	44.34	38-54
2.360	98.0	580.0	66.97	33.03	28-42
0.300	135.0	715.0	82.56	17.44	7-21
0.075	95.0	810.0	93.53	6.47	2-8
Pan	52.0	862.0			
Total	866.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT				
Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10			
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE			
Consultant :	TEJUS CONSULTANTS, BANGALORE			
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)			
Date of Testing :	08-04-2022			
Type of Mix :	Tack coat			
Sample I/D :	3			
Location :	Renukamba Temple Road			
Determination	**Unit**	**Test No**		
		1	**2**	**3**
Loacation	**Chainage**	**For Profile Correction**	**For Profile Correction**	**For Profile Correction**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.744	0.769	0.755
Final weight of plate after application of tack Coat (c)	Kg	0.767	0.792	0.778
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.252	0.254	0.254
Average	Kg/sq.m	0.254		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	TEJUS CONSULTANTS, BANGALORE		
Contractor	Sri. Gopikrishna Apsani (Nidhi Constructions)		
Proposed Use	BC	**Date of Sampling**	09-04-2022
Sample Location	At plant	**Date of Testing**	09-04-2022

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	366.00	351.00	382.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	271.00	264.00	289.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	95.00	87.00	93.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	25.96	24.79	24.35	
5	Average Aggregate impact value	(%)	25.03			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

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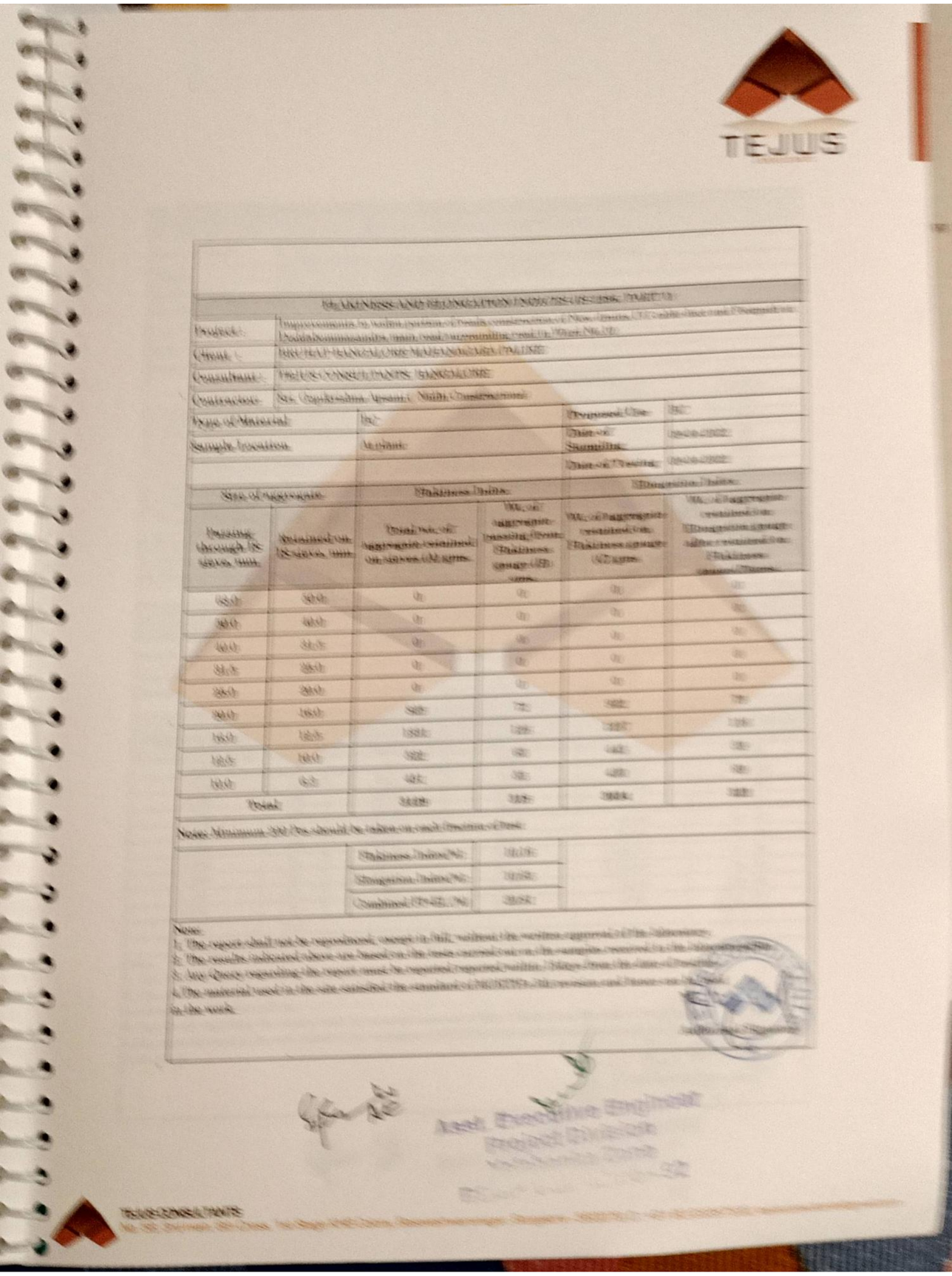

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	11-04-2022
Type of Mix :	BC
Sample I/D :	BC1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	951	931
2. Weight of Mixture after extraction, g	901	882
3. Weight of Bitumen	50	49
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.60	2.00
7. Weight of Bitumen & fines	51.60	51.00
8. Bitumen content in %	5.43	5.48
9. Average Bitumen content in %	5.45	
10. Minimum Bitumen content in %	5.40	

GRADATION FOR BC AFTER EXTRACTION
(As per MORT&H 500-18,Grading-2)

Sample Location:	Virupakshanagar 4th and 5th cross road.	Date of Sampling:	11-04-2022
Type of material & Purpose:	BC	Date of testing:	11-04-2022
		Oven Dry Wt.(gms):	901.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	85	85.0	9.43	90.57	79 - 100
9.50	122	207.0	22.97	77.03	71 - 95
4.75	136	343.0	38.07	61.93	53 - 71
2.360	112	455.0	50.50	49.50	42 - 58
1.180	104	559.0	62.04	37.96	34 - 48
0.600	74	633.0	70.26	29.74	26 - 38
0.300	80	713.0	79.13	20.87	18 - 28
0.150	61	774.0	85.90	14.10	12 - 20
0.075	72	846.0	93.90	6.10	4 - 10
Pan	55.0				
Total	901.0				

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	11-04-2022
Type of Mix :	BC
Sample I/D :	BC2

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	964	932
2. Weight of Mixture after extraction, g	913	883
3. Weight of Bitumen	51	49
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.60	2.00
7. Weight of Bitumen & fines	52.60	51.00
8. Bitumen content in %	5.46	5.47
9. Average Bitumen content in %	**5.46**	
10. Minimum Bitumen content in %	**5.40**	

GRADATION FOR BC AFTER EXTRACTION
(As per MORT&H 500-18,Grading-2)

Sample Location:	Virupakshanagar 3rd cross road.	Date of Sampling:	11-04-2022
Type of material & Purpose:	BC	Date of testing:	11-04-2022
		Oven Dry Wt.(gms):	913.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	81	81.0	8.87	91.13	79 - 100
9.50	106	187.0	20.48	79.52	71 - 95
4.75	135	322.0	35.27	64.73	53 - 71
2.360	124	446.0	48.85	51.15	42 - 58
1.180	101	547.0	59.91	40.09	34 - 48
0.600	76	623.0	68.24	31.76	26 - 38
0.300	82	705.0	77.22	22.78	18 - 28
0.150	68	773.0	84.67	15.33	12 - 20
0.075	74	847.0	92.77	7.23	4 - 10
Pan	66.0				
Total	913.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	11-04-2022
Type of Mix :	Tack coat
Sample I/D :	1
Location	Virupakshanagar 4th and 5th cross road.

Determination	**Unit**	**Test No**		
		1	**2**	**3**
Location	**Chainage**	**@45**	**@95**	**@122**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.789	0.795	0.805
Final weight of plate after application of tack Coat (c)	Kg	0.812	0.818	0.828
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.251	0.251	0.251
Average	Kg/sq.m	0.251		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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4.The material used in the site satisfied the standard of MORTH's 5th revision and hence can be used in the work.

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DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	11-04-2022
Type of Mix :	Tack coat
Sample I/D :	2
Location	Virupakshanagar 3rd cross road.

Determination	**Unit**	**Test No**		
		1	**2**	**3**
Location	**Chainage**	**@110**	**@280**	**@440**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.805	0.784	0.794
Final weight of plate after application of tack Coat (c)	Kg	0.828	0.807	0.817
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.251	0.252	0.252
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

Project	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	TEJUS CONSULTANTS, BANGALORE		
Contractor	Sri. Gopikrishna Apsani (Nidhi Constructions)		
Proposed Use	BC	**Date of Sampling**	18-04-2022
Sample Location	At plant	**Date of Testing**	18-04-2022

Sl. No.	Description		Test No.			Spec Limit (%)
			1	2	3	
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	364.00	352.00	342.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	279.00	274.00	265.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	85.00	78.00	77.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	23.35	22.16	22.51	
5	Average Aggregate impact value	(%)	22.68			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

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FLAKINESS AND ELONGATION INDICES IS 2386, PART I

Project :	Improvement to widen portion of main carriageway of New Airport cable duct and Footpath at Hebbalkempanahalli main road surrounding road in Ward No 10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	M/s Raghavendra Agencies (India) Pvt Ltd

Type of Material	m-sand	Proposed Use	RCC
Sample Location	At plant	Date of Sampling	18.01.2023
		Date of Testing	18.01.2023

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total Wt. of aggregate retained on sieves (A) gms	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	820	78	957	97
16.0	12.5	1300	135	1358	133
12.5	10.0	590	60	445	67
10.0	6.3	470	64	439	66
Total		3180	337	3089	313

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.38
Elongation Index(%):	10.80
Combined FI+EI, (%)	20.57

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TEJUS

DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	20-04-2022
Type of Mix :	Tack coat
Sample I/D :	3
Location	8th Main Deshabandu nagar

Determination	**Unit**	**Test No**		
		1	**2**	**3**
Location	**Chainage**	**For Profile Correction**	**For Profile Correction**	**For Profile Correction**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.745	0.795	0.811
Final weight of plate after application of tack Coat (c)	Kg	0.768	0.818	0.834
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.253	0.254	0.253
Average	Kg/sq.m	0.254		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	20-04-2022
Type of Mix :	BC
Sample I/D :	BC4

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	914	948
2. Weight of Mixture after extraction, g	866	898
3. Weight of Bitumen	48	50
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.60	2.00
7. Weight of Bitumen & fines	49.60	52.00
8. Bitumen content in %	5.43	5.49
9. Average Bitumen content in %	5.46	
10. Minimum Bitumen content in %	5.40	

GRADATION FOR BC AFTER EXTRACTION
(As per MORT&H 500-18,Grading-2)

Sample Location:	Renukamba Temple Road	Date of Sampling:	20-04-2022
Type of material & Purpose:	BC	Date of testing:	20-04-2022
		Oven Dry Wt.(gms):	866.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	77	77.0	8.89	91.11	79 - 100
9.50	110	187.0	21.59	78.41	71 - 95
4.75	130	317.0	36.61	63.39	53 - 71
2.360	112	429.0	49.54	50.46	42 - 58
1.180	105	534.0	61.66	38.34	34 - 48
0.600	62	596.0	68.82	31.18	26 - 38
0.300	74	670.0	77.37	22.63	18 - 28
0.150	62	732.0	84.53	15.47	12 - 20
0.075	64	796.0	91.92	8.08	4 - 10
Pan	70.0				
Total	866.0				

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Improvements to widen portion of roads,construction of New drains,UG cable duct and Footpath at Doddabommasandra main road surrounding road in Ward No.10
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	20-04-2022
Type of Mix :	BC
Sample I/D :	BC3

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	915	964
2. Weight of Mixture after extraction, g	867	913
3. Weight of Bitumen	48	51
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	1.60	2.00
7. Weight of Bitumen & fines	49.60	53.00
8. Bitumen content in %	5.42	5.50
9. Average Bitumen content in %	**5.46**	
10. Minimum Bitumen content in %	**5.40**	

GRADATION FOR BC AFTER EXTRACTION
(As per MORT&H 500-18,Grading-2)

Sample Location:	8th Main Deshabandu nagar	Date of Sampling:	20-04-2022
Type of material & Purpose:	**BC**	Date of testing:	20-04-2022
		Oven Dry Wt.(gms):	867.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	80	80.0	9.23	90.77	79 - 100
9.50	110	190.0	21.91	78.09	71 - 95
4.75	132	322.0	37.14	62.86	53 - 71
2.360	102	424.0	48.90	51.10	42 - 58
1.180	105	529.0	61.01	38.99	34 - 48
0.600	82	611.0	70.47	29.53	26 - 38
0.300	74	685.0	79.01	20.99	18 - 28
0.150	62	747.0	86.16	13.84	12 - 20
0.075	73	820.0	94.58	5.42	4 - 10
Pan	47.0				
Total	867.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT

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Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	TEJUS CONSULTANTS, BANGALORE
Contractor :	Sri. Gopikrishna Apsani (Nidhi Constructions)
Date of Testing :	20-04-2022
Type of Mix :	Tack coat
Sample I/D :	4
Location	Renukamba Temple Road

Determination	**Unit**	**Test No**		
		1	2	3
Location	**Chainage**	**For Profile Correction**	**For Profile Correction**	**For Profile Correction**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.822	0.794	0.774
Final weight of plate after application of tack Coat (c)	Kg	0.845	0.817	0.797
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.251	0.251	0.251
Average	Kg/sq.m	0.251		
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**		

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